



MAY 07 1993

May 6, 1993

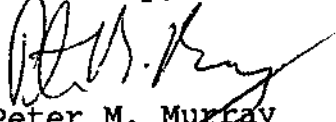
Chuck Schwer  
State of Vermont  
Department of Environmental Conservation  
Hazardous Materials Management Division  
103 South Main St.  
Waterbury, VT 05671-0404

RE: First National Bank of Vermont, Springfield, VT  
VTDEC Site #921253

Dear Chuck,

Enclosed is the report on the investigation of suspected petroleum contamination at the above referenced site. Please call me with any questions that you may have.

Sincerely,

  
Peter M. Murray  
Project Hydrogeologist

cc: Alan Koppel, FDIC

MAY 07 1993

**REPORT ON THE  
SUBSURFACE INVESTIGATION  
OF SUSPECTED PETROLEUM  
CONTAMINATION**

**SITE LOCATION**

FIRST NATIONAL BANK OF VERMONT  
56 MAIN STREET  
SPRINGFIELD, VT 05156  
VTDEC SITE #92-1253  
GRIFFIN PROJECT #1934332

APRIL 1993

PREPARED FOR:  
FIRST NATIONAL BANK OF VERMONT  
56 MAIN STREET  
SPRINGFIELD, VT 05156

Prepared By:

**GRIFFIN INTERNATIONAL, INC.**  
2B Dorset Lane  
Williston, Vermont 05495  
(802) 879-7708

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## **I. INTRODUCTION**

This report describes the investigation of subsurface petroleum contamination at the site of the First National Bank of Vermont in Springfield, Vermont on 17 March 1993. The Vermont Department of Environmental Conservation(VTDEC) requested that an investigation into the extent of contamination be conducted after an underground storage tank(UST) on the bank's property was removed on 24 June 1992.

## **II. SITE BACKGROUND**

### **A. Site History**

An 2,000 gallon gasoline UST located on The First National Bank of Vermont's property was removed on 24 June 1992. The tank contained gasoline which had been used for the bank's vehicle fleet. This tank was installed in 1982 after the removal of an existing #2 heating oil UST. The gasoline tank was in good condition with no rust.

The source of contamination of the soils is most likely from the previous heating oil tank that occupied the site. The heating oil tank was approximately 29 years old at the time of its removal in 1982. The gasoline tank was placed in the same location as the oil tank. There was no formal inspection of the UST or soils surrounding the pulled tank in 1982.

The First National Bank of Vermont bank also owns a 2,000 gallon UST and 10,000 gallon UST on-site which are used for heating oil. The 2,000 gallon tank which was installed in 1953 had been used as back-up for the larger tank, but last year most of the oil was removed and the tank has not been used since that time. The 10,000 gallon tank was installed in 1975.

### **B. Site Description**

The First National Bank of Vermont property is located on the east side of Route 11, Main Street in downtown Springfield, Vermont. The facility consists of the bank building and a paved parking lot. The location of the removed tank is directly east of the bank building in the parking lot. The 2,000 gallon heating oil tank is located approximately 50 feet north of the location of the former UST and the main 10,000 gallon fuel tank is located in the cellar hole for a building which used to be directly north of the bank building. The site map in Appendix A shows the locations of these UST's.

### **III. SOIL BORING/SOIL SAMPLING**

At the time of the UST removal the groundwater level was not known. The original plan of action involved drilling to a depth of 20 feet. If groundwater was not encountered, a soil boring sample would be taken.

A hollow stem auger drill rig with 4.25" inner diameter auger was used to install the monitoring well. The drilling was done in the center of the former location of the gasoline tank which was pulled in June of 1992. The borehole was advanced to a depth of 9.5 feet below grade, at which point, the auger encountered bedrock refusal. Split spoon samples were collected at five foot intervals. No water table was encountered in the overburden deposits. A portable photo ionization device(PID) was used to screen the soil samples for volatile organic compounds(VOC's). Because groundwater was not encountered, a soil sample from the last split spoon was collected for analysis by EPA Method 8020. After sampling the bore hole was backfilled and capped with concrete.

Soils retrieved from the borehole (SB1 on site map)consisted of fine sand with silt and gravel and some pulverized rock. The soil boring report is included in Appendix B. A VOC concentration of 3.0 ppm was detected in the soil sample collected from a depth of 4.5 to 6.5 feet. The sample collected from 9 to 9.5 feet contained a VOC concentration of 95 ppm and a strong diesel odor.

### **IV. ANALYTICAL RESULTS**

Because of the high PID reading obtained in the soil sample collected at a depth between 9 and 9.5 feet, further analytical tests were deemed necessary. The soil sample was analyzed for BTEX + MTBE( EPA Method 8020 Compounds) by EPA Method 8240. The results of the laboratory testing indicated that none of the BTEX or MTBE compounds were detected in the sample. Appendix C contains the laboratory report.

### **V. CONCLUSIONS**

Since groundwater was not encountered during drilling at the First National Bank of Vermont site, it is likely that groundwater in the vicinity of this site has not been impacted by petroleum contamination. There may be contaminated groundwater in the bedrock, but since the site is capped by pavement, flushing of contaminants to the underlying bedrock tends to be unlikely. Laboratory analysis of soils collected from SB1 did not detect the presence of EPA Method 8020 compounds in the soils, but the PID did indicate the presence of residual hydrocarbon vapors. This could be due to the presence of petroleum related compounds other than BTEX/MTBE in the soil.

## **VI. RECOMMENDATIONS**

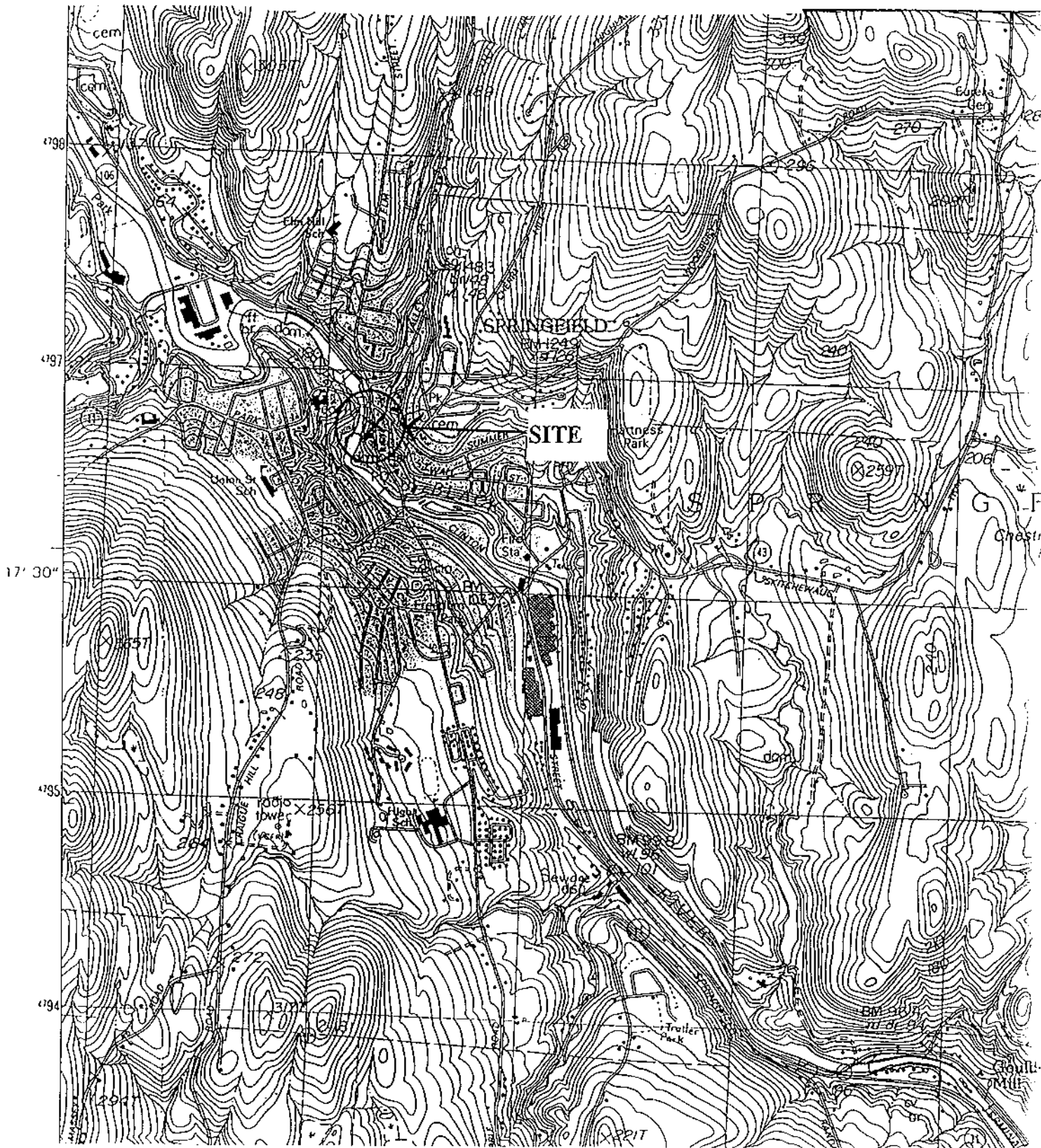
On the basis of the above conclusions, Griffin recommends that additional investigation of subsurface petroleum contamination is unnecessary at this site. However, we do recommend that the 2,000 gallon fuel oil UST which is currently not in use should be removed. Upon removal, the tank should be inspected for leaks and the surrounding soils investigated for petroleum contamination as per VTDEC regulations regarding UST closures.

## **APPENDIX A**

### **SITE MAP**

**Site Location Map**  
**National Bank of Vermont**  
**Rt 11 Main Street**  
**Springfield, Vermont**

Map Source: U.S.G.S. Springfield, VT Quadrangle, 1984  
Scale 1: 25,000





# SITE SKETCH

PROJECT: FIRST NATIONAL BANK OF  
VERMONT

LOCATION: SPRINGFIELD, VERMONT

VTDEC SITE # 92-1253

GRIFFIN PROJECT NO.: 1934332

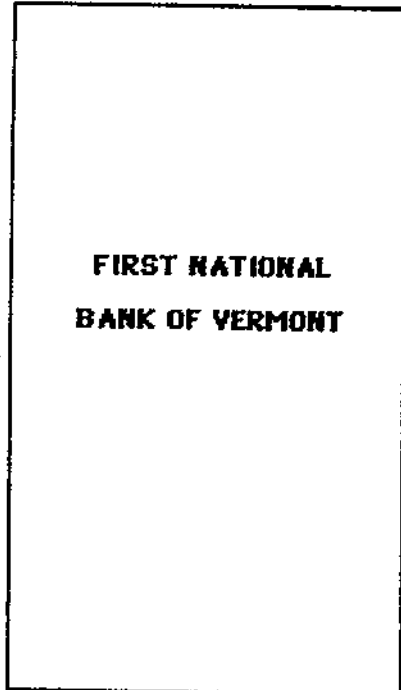


NOT TO SCALE

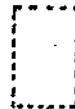


10,000 GAL. FUEL OIL TANK

RT 11  
MAIN ST.



FIRST NATIONAL  
BANK OF VERMONT



2000 GAL. UNUSED FUEL OIL TANK

50'



SITE OF  
2000 GAL. GASOLINE TANK  
REMOVED 24 JUNE 1992

LOCATION OF SOIL BORING



**APPENDIX B**  
**SOIL BORING REPORT**

PROJECT FIRST NATIONAL BANK

LOCATION SPRINGFIELD, VERMONT

DATE DRILLED 3/17/93 TOTAL DEPTH OF HOLE 9'7"

DIAMETER 6"

SCREEN DIA. \_\_\_\_\_ LENGTH \_\_\_\_\_ SLOT SIZE \_\_\_\_\_

CASING DIA. \_\_\_\_\_ LENGTH \_\_\_\_\_ TYPE \_\_\_\_\_

DRILLING CO. GREEN MT BORING DRILLING METHOD HOLLOW STEM AUGER

DRILLER McGINLEY LOG BY M. CASSARA

WELL NUMBER SB1

### Sketch Map

N

SB1

1ST NAT. BANK

RT 11 MAIN ST

DEPTH IN FEET	WELL CONSTRUCTION	NOTES	BLOWS PER 6" OF SPOON	DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
0				
1		CONCRETE.		
2				
3				
4				
5		NATIVE BACKFILL	4.5' - 6.5': 5,4,4,2	Damp, light brown fine SAND Little silt and fine gravel No diesel odor, PID reading 3 ppm.
6				
7				
8				
9			9' - 9'7": 57,100 9'7" REFUSAL	Gray, damp SAND and fine GRAVEL Diesel odor noted, PID reading 95 ppm.
10				
11				BASE OF EXPLORATION AT 9'7"
12				
13				
14				BEDROCK
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

Griffin International

**APPENDIX C**  
**LABORATORY DATA**



**ENDYNE, INC.**

RECEIVED APR 05 1993

Laboratory Services

32 James Brown Drive  
Williston, Vermont 05495  
(802) 879-4333  
FAX 879-7103

LABORATORY REPORT

EPA METHOD 8020 -- COMPOUNDS BY EPA METHOD 8240

CLIENT: Griffin International  
PROJECT NAME: 1st National Bank of VT  
REPORT DATE: March 31, 1993  
SAMPLER: Mike Cassara  
DATE SAMPLED: March 17, 1993  
DATE RECEIVED: March 17, 1993

PROJECT CODE: GIFV1373  
ANALYSIS DATE: March 24, 1993  
STATION: (9'-9'-7") Soil Boring #1  
REF.#: 43,373  
TIME SAMPLED: 10:30

<u>Parameter</u>	<u>Detection Limit (ug/kg)</u>	<u>Concentration As Received (ug/kg)</u>
Benzene	10	ND <sup>2</sup>
Chlorobenzene	20	ND
1,2-Dichlorobenzene	20	ND
1,3-Dichlorobenzene	20	ND
1,4-Dichlorobenzene	20	ND
Ethylbenzene	10	ND
Toluene	10	ND
Xylene	30	ND
MTBE	30	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 7

ANALYTICAL SURROGATE RECOVERY:

1,2 Dichloroethane-d4: 107.%  
Toluene-d8: 101.%  
4-Bromofluorobenzene: 96.%

PERCENT SOLIDS: 95.%

NOTES:

1 None detected